

Inaugural Dissertation  
for  
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submitted to the examination  
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Medical Faculty  
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by  
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Dean



A dissertation on the Medicinal effects of Cold Applications.

Originating perhaps in the infancy of medical science, the application of cold water has continued to the present time, and still we find physicians unacquainted with its powers in the cure of the diseases of the human family - believing therefore that more good is to be done by correctly stating the disease to which it is applicable, modes of application &c, than by a history of its use and progress, and as the time allotted to me would not permit my indulging in inquiries of this nature however desirable they might be, I shall confine myself exclusively to a statement of its use as found by experience in the cure of disease -

Several modes of applying cold water have

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been resorted to viz by dashing it over the body  
from buckets, by means of the shower bath,  
or by sponging the body with a wet sponge,  
all these different forms have their advo-  
cates, but from what I have myself seen,  
and from the testimony of our highly respe-  
cted and worthy proposer of this practice  
of physick, I am inclined to believe, that the  
latter mode is the safest and should be gen-  
erally preferred -

I shall commence with its  
use in fevers, and first in Intermittent  
fever, to intermittent fever it has been ap-  
plied but I believe not very frequently - the  
following circumstance drew my attention  
to its use in the cure of this disease, whilst a  
company of us was a fishing last autumn in  
a small canoe I was attacked with a severe  
chill which continued about forty minutes

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and was followed with a very hot and dry  
slimy pain in the head, with a quick, full and  
hard pulse, whilst I was in this situation I  
made an attempt to jump on shore but acci-  
-dently fell into the water, after some excite-  
-ment I gained the shore, changed my clothes and  
had the satisfaction to find that the sweating  
stage was much sooner induced than it had  
been the preceding paroxysm and without a  
sputition I was completely cured.

I have since, by the consent of the attending  
physicians of our Alms house, tried the effects  
of affusion with cold water, in several obstin-  
-ate cases of intermittents, after having cleansed the  
stomach with an emetic, and in every case attend-  
-ed with high arterial action, it was follow-  
-ed with the happiest effect, by abstracting hu-  
-at from the surface it removes the blood from  
the over loaded capillaries and enables them to

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relive themselves by a copious perspiration.

So remittent fever which is only to be distinguished from intermittent by the shortness of the apnoea it is equally applicable. It appears to me that the proper time to apply cold water in this disease, would be after purgatives, bloodletting, emetics, and cathartics. And to be followed by a mild diaphoretic, as the aspersion generally disappears to a moisture on the skin, diminishing heat and anxiety, rendering the countenance cheerful, the pulse most natural, disposed to sleep, and sometimes cuts short the disease. In the course of this fever the heat of the surface is sometimes so great as to require immediate relief, in this case I am not acquainted with any remedy, which acts so promptly as cold water applied to the surface, and when there is great determination to

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the head, which is denoted by a suffusion  
of countenance, a wild expression of the eye  
and sometimes delirium, cold water well  
be found an excellent auxiliary to cups and  
parches.

In the early stage of our bilious  
inflammatory fever, our remedy is well suit-  
ed, this disease is generally attended with  
great action of the pulse and great heat  
of the body, the application of cold water  
in such cases is eminently beneficial, it  
subdues the activity of the blood vessels,  
causes diaphoresis, and quietes the iratibil-  
ity and restlessness of the patient, but if  
it is delayed until the system is reduced  
by our remedies or by disease - where there is  
a feeble pulse and symptoms of great de-  
bility, our remedy so far from being use-  
ful, will be absolutely pernicious. The syst-  
em.

At this reaction increase to  
So typhus been appear after resumption of the disease and before it is over. it is a thing so great and ways alter opinion in this disease cation of with great period probably a I presume

At this stage is so low that it is incapable of reaction and the cold water will necessarily increase the exhaustion.

So typhus fever our remedy seems to have been applied with the greatest advantage. After resorting to emetics to break the force of the disease, to relieve the pain in the head and lessen the irritating heat of the surface, it is well suited, and scarcely any thing so well relieves the patient from the great anxiety and restlessness which always attends this disease. After the depression which follows the exacerbation in this disease has taken place, the application of cold water might be attended with great mischief, as the system at this period is unable to react, and death would probably ensue. under such circumstances I presume our remedy would not be app-

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licable, although I am sensible it has been  
employed after fortifying the ~~system~~ with  
opium, brandy, or some other stimulant. It  
should not be employed when there any  
chilliness, pallor of the countenance, or the  
slightest perspiration.

<sup>Feaver</sup> To yellow <sup>feaver</sup> which has occasioned so much con-  
troversy among physicians, and such destru-  
ction to the inhabitants of our cities, our re-  
city has been applied, this disease has by  
frequent dissection been found to exert its  
greatest force on the stomach, inflammation  
in all its various grades, have been found  
in this organ, and as there is no remedy  
more effectual in relieving or bringing  
about resolution, in inflammation  
generally, than cold applied to the infl-  
amed part, as we see in swelled testes, be-  
wines, &c. & why would not draughts

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of cold water have the same effect upon the inflamed surface of the stomach. Dr. O'Shomas tells us that cold water taken internally as drink in small quantities frequently repeated, has been observed to moderate the excessive heat of the body, as well as the violence of general febrile action and thirst, it is likewise efficacious he says, in disposing the skin to perspire gently, and in preventing inflammation and irritation of the stomach. Dr. Rush whose name stands ranked amongst the highest of the profession, also informs us, that the internal and external use of cold water was a most agreeable and powerful remedy in this disorder, he directed it to be applied by means of napkins to the head, and to be injected into the bowels by way of glyster, he likewise advising the washing the

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face and hands and sometimes the feet with cold water and always, he says with extractive age, when applied in this way it gradually abstracts the heat from the body, and thereby lessens the action of the system, cold water when applied to the feet as certainly reduces the pulse in force and frequency, as warm water applied in the same way produces contrary effects upon it — In the hydrocephalic state of fever, cloths wetted with cold water or vinegar, or ice applied to the head, contribute very much to relieve the pain in the head — in this case cold acts by carrying off the heat from, and lessening the determination to the part affected

In inflammation the application of cold is indeed one of the most powerful means which we possess for abstracting heat and subduing the disease, and it has been carried so

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for in some instances that pounded ice and  
snow have been employed for this purpose  
in phrenitis after the use of bloodletting both  
general and local, topical cold over the region  
of the brain by a wet towel, or frequently imm-  
ersing the head in a bucket of cold water, will  
indeed in many cases prove more efficacious  
than the application of a blister, as this has been  
observed occasionally not only to accelerate the  
pulse, but likewise under the patient more un-  
managable, but the application of a blister  
will not preclude us from the use of cold app-  
lications, as linen cloth wetted with water,  
may likewise be kept constantly to the temples  
and forehead and renewed as often as this re-  
duces the temperature of the part by continuance  
In ophthalmia the application of cold water  
or milk and water is in many cases eminent-  
ly beneficial, and may be applied to the

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eye. By means of an eye cup, or when this cannot be obtained by wet pledgets, or where we have a reason to believe the complaint is kept up by some irritating particle in the eye, by frequently injecting cold water into the eye by means of a small syringe - in all superficial inflammation the use of cold application will be found of service. As I have ~~found~~ seen in cases of fractures, bruises and other accidents, greatly reducing the swelling and enabling the parts to regain their former tone -

In scarlatina I have not had an opportunity of seeing our remedy tried, but from the testimony of Dr. Curie I am inclined to believe that it is truly a valuable remedy. Dr. Curie mentions in his medical reports that he found the injection of cold water to extinguish incipient scarlatina in repeated instances so as to prevent either efflorescence

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or any affection in the throat from taking place  
he says the plan he follows, if called in at this  
early period, when the patient feels steadily  
hot and the shivering having gone off, is to  
strip the patient quite naked and dash four  
or five gallons of the coldest water over his  
naked body, the heat returning it is somet-  
imes necessary to use it ten or twelve times  
in twenty four hours, during this time he says,  
cold water and lemonade should be used as  
drinks, and the bowels opened if necessary, by  
the submiate of mercury, in a few instan-  
ces he has thought it advisable to assist the  
affusion, by the diaphoretic power of a solu-  
tion of tartized antimony, he adds that in  
upwards of one hundred and fifty cases he uni-  
formly followed the practice here detailed and  
with a degree of success so nearly invariably that  
he could not contemplate it without emotion

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In haemorrhage cold water is of acknowledged efficacy - in epistaxis cold applications is one of the remedy's <sup>is</sup> minimally resorted to, it may be applied by dipping the head in water made cold by the minute of <sup>ice</sup> aqua, or some other salt by immersing the scrotum in cold water, or applying cloths wetted with the same to the labia pudenda of the female, by injecting cold water up the nostril, or by keeping it constantly applied by means of a sharp gut which being tied at one end by means of a thread, and inserted up the bleeding nostril and filled with cold water, which I suspect will seldom fail of stopping the discharge - cold water has been occasionally used in haemorrhage from the lungs, but I believe the remedy would be hazardous and would hardly fail of aggravating the disease, its action is undoubtedly

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to produce a momentary constriction of the extremities repels and consequently must determine the blood to the internal parts, cold drinking is much more appropriate and an in all cases proper — In uterine hemorrhage it is peculiarly suited, applied to the vulva or over the region of the uterus, or thrown up the vagina by means of a syringe will be found highly useful. in prostrate flooding cold water or even ice introduced into the uterus will prove very beneficial —

In cases of obstinate constipation which so frequently attends colic, our remedy is not to be neglected. it may be employed by dash-  
ing it over the patient, or by way of mechan-  
ical dilatation viz by injecting a large qu-  
antity of it by a proper syringe which will  
throw it into the rectum in a continued stream  
and with some force, the patient drinking

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copiously at the same time, some persons have  
borne ten gallons to be injected in this way  
before they were relieved. — As an Antispasmodic  
in Colica pictonum, cold water dashed on the ext-<sup>er</sup>  
-mities has been spoken of in high terms, it is  
said the benefit obtained by dashing cold  
water on the extremities in this disease results  
owing to the sympathy which exists between  
them and the intestines, the fibers of the latter  
become relaxed, while the sudden contraction  
of the vessels on the skin, in consequence of  
the application of cold, determines the flow  
of blood internally and occasions a copious  
secretion from the intestinal surface, wh-  
-ich only a few expulsion quickly ensues. — Our  
remedy will also be found to assist the ope-  
-ration of tonics in many cases of debility and  
as such to the physician it is truly a val-  
-uable remedy and should never be lost

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right of, can should however be taken to apply it only to persons whose systems are not so far debilitated as to be incapable of reaction, which may be presumed to be the case, if the patient feels a pleasant glow over his body and is cheerful after coming out of the bath, but if shiverings come on, or sinking of the pulse, or the patient feels drowsy, the remedy should not be repeated - In closing this imperfect essay, I cannot but acknowledge my obligations to the learned professors in the different departments of this university, whom character both as men and physicians, entitle them to the highest respect, and whom famous I hope I shall justly appreciate, whilst gratitude remains to be a virtue -











